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What is claimed is:

1 1. A method for uniformly printing pixel rows of a predetermined region of an
2 image swath in a color, comprising:
3 providing a first printhead having a first ink matched to the color and at least one
4 additional printhead having a fluid, each printhead having individual printing elements for
5 controllably printing individual pixels in corresponding ones of the rows;
6 detecting defective printing elements and functional printing elements in the first
7 printhead;
8 identifying the rows corresponding to the defective printing elements and the
9 functional printing elements; and
10 printing individual pixels with at least one of the additional printheads such that a
11 higher percentage of pixels in the rows corresponding to the defective elements are printed
12 relative to the percentage of pixels printed in the rows corresponding to the functional
13 elements.

1 2. The method of claim 1, wherein the fluid is a colored ink.

1 3. The method of claim 2, wherein each at least one additional printhead has a
2 different colored ink.

1 4. The method of claim 2, wherein the first ink is black ink, and the colored ink is
2 selected from the group consisting of cyan ink, magenta ink, and yellow ink.

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1 5. The method of claim 1, wherein the fluid is a conditioning solution.

1 6. The method of claim 5, wherein the conditioning solution has a substantially
2 clear color.

1 7. The method of claim 1, further including:
2 printing at least some individual pixels with the first printhead.

1 8. The method of claim 7, wherein some individual pixels are printed with the at
2 least one of the additional printheads before the some individual pixels are printed with the
3 first printhead such that the fluid is placed on the image swath below the first ink.

1 9. The method of claim 8, wherein some individual pixels are printed with a
2 different at least one of the additional printheads after the some individual pixels are
3 printed with the first printhead such that the fluid is placed on the image swath on top of
4 the first ink.

1 10. The method of claim 7, further comprising:
2 providing image data; and
3 processing the image data to form the image swath.

1 11. A method for printing a predetermined region of an image swath organized in
2 rows and columns of pixels in a color, comprising:
3 identifying defective printing elements in a first printhead;

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4 providing at least one under/overprinting map defining a predetermined total
5 percentage of under/overprinted pixels, the map enabling the printing of relatively more
6 pixels in at least some rows corresponding to the defective printing elements and relatively
7 fewer pixels in at least some other rows corresponding to other printing elements; and
8 printing the predetermined region with at least one additional printhead according
9 to the corresponding one of the under/overprinting maps.

1 12. The method of claim 11, wherein the predetermined total percentage is the
2 same regardless of the number of defective printing elements in the first printhead.

1 13. The method of claim 11, wherein the predetermined total percentage is
2 proportional to the number of defective printing elements in the first printhead.

1 14. The method of claim 11, wherein the predetermined region represents at least a
2 portion of at least one text character.

1 15. The method of claim 11, further including:
2 printing the predetermined region with the first printhead.

1 16. The method of claim 15, wherein the first printhead deposits drops of an ink
2 having the color, and each additional printhead deposits drops of another fluid.

1 17. The method of claim 16, wherein the ink is a pigment-based ink.

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1 18. The method of claim 16, wherein the fluid is a dye-based ink having a different
2 color.

1 19. The method of claim 18, wherein:
2 the color is black;
3 the at least one additional printhead is a second printhead and a third printhead;
4 the second printhead deposits drops of cyan ink; and
5 the third printhead deposits drops of magenta ink.

1 20. The method of claim 11, wherein the predefined total percentage of
2 under/overprinted pixels is different for at least some of the overprinting maps.

1 21. The method of claim 11, wherein the providing further comprises, for each of
2 the at least one under/overprinting maps:
3 constructing the at least one under/overprinting map based on the defective
4 printing elements.

1 22. The method of claim 11, wherein the providing further comprises, for each of
2 the at least one under/overprinting maps:
3 selecting one of a predefined set of under/overprinting maps based on the defective
4 printing elements.

1 23. The method of claim 11, wherein the corresponding under/overprinting map
2 has a width less than or equal to the number of columns in the swath and a height less than

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3 or equal to the number of rows in the swath, and wherein the printing further comprises
4 replicating the under/overprinting map in the column direction and the row direction so as
5 to encompass the total number of rows and columns in the swath.

1 24. A swath printer, comprising:

2 means for identifying defective printing elements in a first printhead of the swath
3 printer;

4 means for mapping at least one of the defective printing elements to at least one
5 corresponding defectively-printed pixel row in a uniformly colored region of an image
6 swath; and

7 means for under/overprinting with another printhead more pixel positions in at
8 least one defectively-printed pixel row than in at least some other pixel rows so as to
9 compensate for the defective printing element corresponding to the defectively-printed
10 pixel row.

1 25. A swath printing system, comprising:

2 a print mechanism responsive to control commands for printing drops of a colored
3 ink and at least one additional fluid from a plurality of printing elements onto specific pixel
4 locations of pixel rows of a print medium to print an image;

5 at least one under/overprinting map for governing the printing of the drops of a
6 corresponding at least one additional fluid, the map defining a relatively higher percentage
7 of printable pixel locations in the pixel rows corresponding to defective ones of the

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8 printing elements and a relatively lower percentage of printable pixel locations in the pixel
9 rows corresponding to functional ones of the printing elements; and
10 a print controller connected to the under/overprinting map and the print
11 mechanism, the print controller adapted to receive image data for a region of uniform
12 color and generate control commands for printing drops of the at least one additional fluid
13 as governed by the under/overprinting map.

1 26. The swath printing system of claim 25, further comprising:

2 a printing element quality detector connected to the print mechanism and the print
3 controller for identifying the defective ones of the printing elements and the functional
4 ones of the printing elements.

1 27. The swath printing system of claim 25, wherein the print controller further
2 generates control commands for printing drops of the colored ink.